

FRANKMAN, E.A.; POGORELKO, P.I.; IGRON, S.M. (Tashkent).

Activities of the Tashkent Urological Society in 1957. Urologiya 23
no.6:70-71 N-D '58. (MIRA 11:12)

(TASHKENT-UROLOGY--SOCIETIES)

1. N. FRAKMAN, V. PRESNYAK

2. USSR (600)

4. Chucks

7. Repairing self-centering chucks. MT3 12 no. 11. 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SIDOROVA, N.G.; FRAKMAN, N.I.

Cycloalkylation of aromatic compounds. Part 19: Reaction of
benzene with 1-cyclohexylcyclohexanol. Zhur.ob.khim. 31 no.7:
2155-2158 J1 '61. (MIRA 14:7)
(Cyclohexanol) (Benzene)

FRAKMAN, Yu.V., inzh.; SHARGORODSKIY, V.L., inzh.

Measurement of the mean temperature of windings in electrical equipment under load. Elektrichestvo no.7:49-55 JI '63. (MIRA 16:9)

1. Upravleniye energokhozyaystvom UzSSR.
(Electric machinery—Windings)

FRAKMAN, Yu.V., inzh. (Tashkent)

Calculation of transformer yoke dissipation. Elektrichestvo no.4:
65-67 Ap '65. (MIRA 18:5)

FRAKNOY, J.

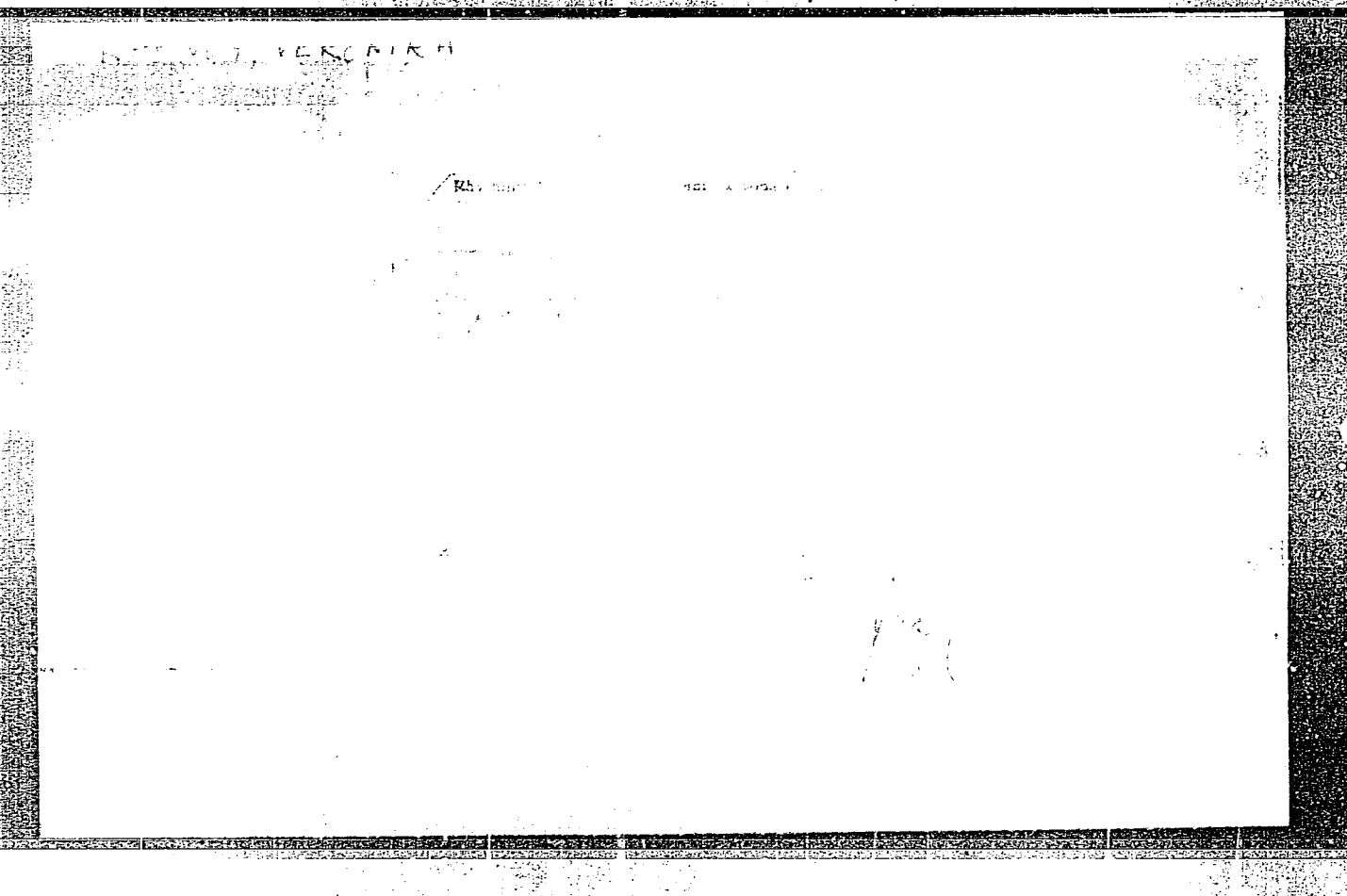
In the wake of our articles. p.29.

MUSZAKI ELET. (Muzzaki es Termeszettudomanyos Egyesuletek Szovetsege) Budapest.
Vol 11, no. 6, Mar 1956.

SOURCE: EEAL, Vol 5, no. 7, July 1956.

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413530006-9



APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413530006-9"

L 41778-66 EWP(t)/ETI IJP(c) JD
ACC NR: AP6031686 SOURCE CODE: HU/0005/65/071/010/0453/0461

AUTHCR: Fraknoy, Veronika; Endrene, Koros 30

ORG: Research Institute for the Communications Technological Industry, Budapest 13
(Hiradastechnikai Ipari Kutato Intezet)

TITLE: Syneresis of iron(III) hydroxide gels 17

SOURCE: Magyar kemiai folyoirat, v. 71, no. 10, 1965, 453-461

TOPIC TAGS: gel, gelation, hydroxide, iron compound

ABSTRACT: Tests were conducted to establish the gelatination time of the gels, the time required for the syneresis to start, the amount of liquid separated in the course of the syneresis in relation to the amount of KCl added (in the 80-300 millimoles/l. range), and the mechanism of the syneresis process. It was found that the syneresis of the gels represents the last stage in the coagulation process. The processes could be characterized by employing the Reerink formula for the coagulation of diluted sols. Orig. art. has: 13 figures and 2 tables. [JPRS: 33,540]

SUB CODE: 07 / SUBM DATE: 22Apr65 / OTH REF: 008

Card 1/1 20

FRAKTER, A. M.

"Solution of Some Problems of Large Deformations of Thin Elastic Cantilevers From the Point of View of the Elementary Theory of the Resistance of Materials." Cand Tech Sci, Far East Affiliate imeni V. L. Komarov, Acad Sci USSR, Vladivostok, 1954. (KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertation Defended at USSR Higher Educational Institutions (14)

FRAKTER, A. M.

FRAKTER, A. M. : "Determination of the trajectory of the edge of a bending, elastic cantilever arm". Vladivostok, 1955. Acad Sci USSR. Far East Affiliate imeni V. L. Komarov. (Dissertations for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

AUTHORS: Popereka, M.Ya., Docent, Candidate of SOV/32-24-9-50/53
Technical Sciences, Fraktor, A.M., Candidate
of Technical Sciences, Frusin, K.S., Engineer,
Martynenko, A.A., Engineer, Famil'tsev, D.N., Engineer

TITLE: On the Determination of the Interior Stress of Galvanic Coatings
(Ob opredelenii vnutrennikh napryazheniy v gal'vanicheskikh po-
krytiyakh). On the Occasion of the Article by Sh.Z.Zakirov and
Yu.N. Petrov, Published in the Periodical "Zavodskaya laboratoriya", Nr 12, 1957 (Po povodu stat'i Sh.Z.Zakirova i Yu.N. Petrova, opublikovannoy v zhurnale "Zavodskaya laboratoriya", Nr 12, 1957g.)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1164-1165 (USSR)

ABSTRACT: The article mentioned in the title contains formulae for the determination of stresses which cannot yield exact results and besides, are not new. This type of calculating stresses was already carried out by M.L. Pertsovskiy (Ref 1), as well as by Brenner and Senderoff (Brenner and Senderoff) (Ref 2), and by the authors of the present article. One of the equations mentioned is actually only an alteration of the equation already suggested by Stoney (Ref 4) in 1909. In the further explanations it is mentioned among other facts in this paper that the calculation of Zakirov and

Card 1/2

On the Determination of the Interior Stress of
Galvanic Coatings. On the Occasion of the Article by
Sh.Z. Zakirov and Yu.N. Petrov, Published in the Periodical
"Zavodskaya laboratoriya", Nr 12, 1957

SOV/32-24-9-50/53

Petrov does not make a classification of the stress of the coatings possible. It is also mentioned that the calculation of the stress according to the radius of the curve has a number of deficiencies. It is, for instance, not possible to carry out any measurements during the electrolysis. For these reasons the methods suggested by Pertsovskiy and A.T. Vagramyan and Yu.S. Tsareva (Ref 5) and others are better. Finally the editors mention at the end of this article that they agree in principle with this critical comment. There are 5 references, 3 of which are Soviet.

Card 2/2

FRAKTER, A. M.

Determining trajectories of highly deflected elastic cantilever
beams. Nauch.dokl.vys.shkoly; stroi. no.2:105-109 '59.
(MIRA 13:4)

1. Rekomendovana kafedroy soprotivleniya materialov, osnovaniya
i fundamentov Vsesoyuznogo nauchnogo inzhenerno-stroitel'nogo
instituta.

(Orders)

L 52701-65 EWT(1)/EPA(s)-2/EWT(m)/EPT(n)-2/EPR/EWP(t)/EPA(bb)-2/EWP(b)
 Pz-5/PS-4/Pt-7/Pu-4 IJP(c) JD/WM/JG/At

UR/0294/65/003/002/0300/0306

ACCESSION NR: AP5010472

AUTHOR: Gordov, A. N.; Krivtsov, V. A.; Fraktovnikova, A. A.; Chistyakov, V. A.

TITLE: Experimental study of the inertia of microthermocouples 21

61
60
3

SOURCE: Teplofizika vysokikh temperatur, v. 3, no. 2, 1965, 300-306

TOPIC TAGS: thermocouple, heat transfer coefficient, time lag, thermal inertia, chromel alumel thermocouple, copper constantan thermocouple, thermal detector

ABSTRACT: Five types of miniature thermocouples produced by a technology developed at FEI (V. Ye. Mirashin et al., Voprosy teploobmena [Problems of Heat Transfer], 1959) were tested for thermal time lag in a regular thermal mode, where the lag of the thermocouple can be assumed equal to the time necessary for the temperature difference between the body and the medium to assume a value $1/e = 0.37$ of its initial value. Chromel-alumel and copper-constantan thermocouples of varying wire thickness were mounted in capillary tubes, and their thermal lag was measured by recording the free cooling rate in quiet and in moving air (wind tunnel), in quiet and in moving water, and in liquid tin. The time constants ranged from 33 seconds in the case of quiet air to 0.04 seconds in the case of liquid tin, depending on the thermocouple diameter, but in all cases the plots of

Card 1/2

L 52701-65

ACCESSION NR: AP5010472

the time constants against the heat transfer coefficient had a similar shape. The material used to insulate the thermocouple from its steel jacket did not play any role in the time constant. Orig. art. has: 5 figures, 9 formulas, and 2 tables.

[02]

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D. I. Mendeleyeva (All-Union Scientific Research Institute of Metrology)

SUBMITTED: 16Jul64

ENCL: 00

SUB CODE: TD

NO REF SOV: 006

OTHER: 000

ATD PRESS: 4013

RR
Card 2/2

L 11706-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l)
ACC NR: AP6019578 IJP(c) JD/WW/JG SOURCE CODE: UR/0115/66/000/004/0048/0050

AUTHOR: Druzhinina, I. P.; Vladimirskaia, T. M.; Fraktovnikova, A. A.

ORG: none

TITLE: Thermoelectric properties of certain refractory metals

SOURCE: Izmeritel'naya tekhnika, no. 4, 1966, 48-50

TOPIC TAGS: refractory metal, thermoelectric property, thermocouple, temperature dependence, thermal emf, tantalum, zirconium, niobium

ABSTRACT: Since refractory metals constitute the basic component of high temperature thermocouples ($>1300^{\circ}\text{C}$), the authors have investigated the thermoelectric properties of Ta, Zr, and Nb of varying degree of purity and measured the temperature dependence of their thermal emf when coupled with platinum. The tests were made on wires drawn from rods forged (at varying temperatures) from arc-molten ingots. The integral emf was determined by calibration of thermocouples (with Pt) in vacuum and in inert-gas atmospheres. The thermal emf was measured by a null method with a potentiometer. The results show that the thermocouples have more stable characteristics in vacuum than in gas (Ar). The measured temperature dependence can be analytically approximated by means of a second-order equation $E = A + Bt + Ct^2$, and the values of A, B, and C are tabulated for Ta, Nb, and Zr. The integral emf of Ta-Pt and Nb-Pt thermocouples is 33 and 28 mv at 1636 and 1515 $^{\circ}\text{C}$, respectively, and that of Zr-Pt is 25 mv at 1437 $^{\circ}\text{C}$. Zr is not suitable for use below 440 $^{\circ}\text{C}$ because of a change in its properties. The

UDC: 537.323.001.5

Card 1/2

L 41706-66

ACC NR: AP6019578

plots of the absolute differential emf vs. temperature for Ta and Nb are smooth curves, but the plot for Zr shows a reversal corresponding to the change of properties below 440C. Orig. art. has: 3 figures, 2 formulas and 3 tables.

SUB CODE: 20, 11/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 001

Card 2/2 *20*

ALEKSEYEV, A.Ye.; BASHARIN, A.V.; BOGORODITSKIY, N.P.; VASIL'YEV, D.V.;
IVANOV, V.I.; LYUTER, R.A.; MANOYLOV, V.Ye.; YERMOLIN, N.P.;
FRAMKE, A.V.

Vladimir Tikhonovich Kas'ianov; on the seventy-fifth anniversary
of his birth and the tenth anniversary of his death.
Elektrichestvo no.4:95 Ap '62. (MIRA 15:5)
(Kas'ianov, Vladimir Tikhonovich, 1887-1952)

S/058/63/000/002/009/070
A059/A101

AUTHOR:: Frammhold, Ernst Alfred

TITLE: Radiation-warning device

PERIODICAL: Referativnyy zhurnal, Fizika, no. 2, 1963, 74, abstract 2A487
(Pol. pat. no. 45685, March 8, 1962)

TEXT: A device has been patented to obtain and transmit information on radioactive radiation at hardly accessible and remote places. The essence of the invention is in the fact that information is transmitted by ultrahigh-frequency waves and decimeter waves. The detectors and transmitters are disposed at places where the radiation is being measured. With low radiation intensities, a Geiger-Müller counter is used the pulses of which are amplified and fed to the input of the transmitter which modulates the carrier-frequency oscillations. With a high activity, the measurements are performed with an ionization chamber. Primary detector stations of radioactive radiation are alternately switched on with a clockwork. It is, on the other hand, possible to control the activity level at 24 points, if only one receiver is present at the central measuring

Card 1/2

Radiation-warning device

S/058/63/000/002/009/070
A059/A101

station. The signal received is transmitted to the demodulator, then amplified, and either recorded with a pulse counter or actuates a signalling circuit. All transmitters and the receiver are tuned to one and the same wavelength. The basic circuit diagram of the transmitter is given.

P. Sosenko

[Abstracter's note: Complete translation]

Card 2/2

BA FRAMPOL, L.V.

28

The transportation of refined wet sugar from the centrifugals to the lump-sugar press. L. V. Frampol. *Sukharnaya Prom.* 28, No. 3, 30-1 (1981). Screw conveyors produce abrasion of the crystals which lose brilliancy and must be replaced by grasshopper conveyors. Screens must be installed before the bucket elevators, as well as powerful magnets to remove metallic particles. V. R. Baikov

FRAMPOL, L.V.
FRAMPOL, L.V.

Measures for the prevention of contamination of products in
sugar refining. Sakh.prom.31 no.9:14-15 S '57. (MIRA 10:12)

1. Krasnopresnenskiy rafinadnyy zavod.
(Sugar industry) (Food contamination)

FRAMPOL', L.V.

Screw or belt conveyer. Sakh.prom. 34 no.3:47 M: 1960
(MIRA 13:6)

(Moscow--Sugar machinery)

FRAMPOL', L.V.

Reduce communication lines in sugar factories. Sakh.prom. 34
no.6:56 Je '60. (MIRA 13:7)

1. Krasnopresenenskiy sakharorafinadnyy zavod.
(Sugar industry--Equipment and supplies)

FRANA, Antonin, inz. ekonom.

Use of electromobile by the postal service of the German Democratic Republic. Cs spoje 7 no.11:19-21 N '62.

1. Vysoka skola dopravní, Dresden.

FRANA, G.; VLCEK, T.

Refraction changes in leatherworkers. Pracovni lek.
3 no.2:72-85 May 1951. (CLML 20:11)

1. G. Frana, M.D.-Industrial doctor at Svit National
Enterprise Plant. 2. T. Vlcek, M.D.-Head of the Eye
Department of the State District Hospital in Gottwaldov.

FRANA, J.

CZECH/37-59-2-11/20

AUTHORS: Jaroslav Frána, František Janáček

TITLE: Letter to the Editor: Some Luminescent Properties of AgBr Containing Ag₂S

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 2, p 210

ABSTRACT: The spectral distribution and decay time of normal and deformed discs of AgBr + 0.02 mol % Ag₂S were studied at low temperatures. The materials were prepared by a method due to Stassiw (Ref 1); at -180 °C. Three maxima were registered: at 6450 and 6100 A.U. and a weak maximum at 5350 A.U. At -110 °C, the two red maxima coincided and the maximum at 5350 A.U. disappeared. The integral intensity of luminescence in deformed plates was considerably smaller than in non-deformed ones. These measurements were taken at -110 °C, but no quantitative relations have been established. The decay time of luminescence was measured on the same samples by an apparatus described by Tolstoy and Feofilov (Ref 3). At -190 °C, the intensity decreased according to a hyperbolic law. The red part of the spectrum decayed more rapidly than the green part. Pre-exposure of the

Card 1/2

CZECH/37-59-2-11/20

Letter to the Editor: Some Luminescent Properties of AgBr
Containing Ag₂S

samples resulted in considerably decreased integral
intensity of luminescence and the disappearance of the
green band. The decay was the same as for the red part
of the spectrum in a normal sample.

There are 3 references, of which 1 is Soviet, 1 German
and 1 Czech.

ASSOCIATION: Fysikalni ústav Karlovy university a katedra obecné
fysiky Matematicko-fyzikální fakulty, Praha
Card 2/2 (Department of Physics, Charles University, Prague)

SUBMITTED: August 2, 1958 ✓

FRANA, J.

CZECHOSLOVAKIA/Optics - Physical Optics.

K

Abs Jour : Ref Zhur Fizika, No 12, 1959, 28473

Author : Frana, Jaroslav, Janacek, Frantisek

Inst : ~~Janacek, Frantisek~~

Title : Some of the Luminescent Properties of AgBr with an admixture of Ag₂S

Orig Pub : Cheklosl. fiz. zh., 1959, 9, No 2, 256-257

Abstract : An investigation was made of the glow spectra and the course of attenuation of luminescence of undeformed and deformed plates of AgBr + 0.02 molecular percent Ag₂S at low temperatures. The spectra were investigated photographically. At a temperature of -180° C there are contained in the glow spectrum the maxima at 6,450 and 6100 Å and a weak maximum at 5350 Å; at -110° C the first two maxima come together, and the latter vanishes. The deformation of the specimens leads to a drop in the integral luminescence

Card 1/2

- 129 -

Karlova Univ, Prague

CZECHOSLOVAKIA/Optics - Physical Optics.

K

Abs Jour : Ref Zhur Fizika, No 12, 1959, 28473

brightness. The attenuation was studied with a
 taumeter. At -180°C the attenuation is expressed
 by the hyperbolic formula $I = I_0 / [1 - (1 + at)^{-\alpha}]$,
 with $\alpha = 0.93$, $a = 10^3$ for $t < 2 \times 10^{-3}$ sec and
 $\alpha = 0.46$, $a = 0.6 \times 10^3$ for $t > 2 \times 10^{-3}$ sec.
 It was established with the aid of filters that
 the attenuation of the red glow is faster than the
 attenuation of the green glow. -- Kh.F. Kyaenbre

Card 2/2

CZECHOSLOVAKIA/Optics - Physical Optics.

K

Abs Jour : Ref Zhur Fizika, No 12, 1959, 28474
Author : Frana, Jaroslav; Janacek, Frantisek
Inst : ~~unclassified source~~
Title : Some of the Luminescent Properties of AgBr with an
Admixture of Ag₂S
Orig Pub : Geskosl. casop. fys., 1959, 9, No 2, 210
Abstract : See Abstract 28473.

Card 1/1

- 130 -

ACCESSION NR: AP4026359

Z/0055/64/014/003/0152/0157

AUTHOR: Frana, J.; Rezanka, I.

TITLE: Radioactive decay of Ni sup 65

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 3, 1964, 152-157

TOPIC TAGS: Radioactive decay, nuclear physics, Ni sup 65, Cu sup 65, Coulomb excitation, beta spectrum, spectroscopy, beta transition, gamma spectrum, NiCl sub 2, Ni sup 64, neutron, thermal neutron, spectrometer

ABSTRACT: The radioactive decay of Ni⁶⁵ was studied on a short-lens spectrometer and on a scintillation spectrometer with a 200 channel amplitude analyzer. NiCl₂ with nickel enrichment to 78% was used for the measurements. This was bombarded in a reactor with a thermal neutron flux of $10^{13}/\text{cm}^2$ sec for 2 hours. The continuous beta spectrum was measured on a short-lens spectrometer with a 2% resolution. The measurements indicated a half-life period of 2.58 hours. The gamma spectrum was measured with a 1.5 x 1" NaI crystal and 200 channel amplitude analyzer. The spectrum was resolved into different lines, and the energies and transition intensities were determined. Three groups of the beta spectrum with energies of 2140 ± 10 ,

Card 1/2

ACCESSION NR: AP4026359

1020 \pm 25, and 650 \pm 30 keV and with relative intensities of 58 \pm 5, 11 \pm 3, and 30 \pm 5% were found with a magnetic spectrometer. The existence of another two beta transitions with energies of 520 and 420 keV were also found with gamma spectrum measurements. Seven transitions were found in the gamma spectrum: 370 (4.6%), 510 (0.37%), 610 (0.22%), 1115 (17%), 1480 (24%), 1620 (0.5), and 1720 keV (0.45%). Insofar as the existence of other gamma transitions is concerned, they are weaker than 0.03% at decay. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Nuclear Research Institute, Czechosl. Acad. Sci., Res

SUBMITTED: 06Sep63

DATE ACQ: 15Apr64

ENCL: 00

SUB CODE: NP

NO REF SOV: 000

OTHER: 017

Card 2/2

L 56705-65 EWP(t)/EWP(b) Feb DIAAP/IJP(c) JD/JG

ACCESSION NR: AP5018830

CZ/0038/64/010/008/0292/0292

AUTHOR: Frana, Jiri (Frana, J.); Rezanka, Ivo (Rzhezanka, I.); Vobecky, Milos (Vobetskiy, M.); Mastalka, Antonin (Mashtalka, A.)

TITLE: Spectrum of lanthanum isotopes deficient in neutrons with a half life of about 5 hours

SOURCE: Jaderna energie, v. 10, no. 8, 1964, 292

TOPIC TAGS: lanthanum, radioisotope, spectroscopy

Abstract; Spectra of gamma isotopes La 132 and La 133 were measured. They have approximately identical half lives; they were obtained by splitting a Ta target with protons of 660 MeV. Measurements on a scintillation spectroscopy showed about 30 transitions (with a maximum energy 3625 keV and $T_{1/2} = 5.0 \pm 0.2$ Hours. Energies and intensities of transitions are listed. The article is an abstract of Report UJV No 1017/64.

ASSOCIATION: Ustav jaderneho vyzkumu CSAV, Rez (Institute for Nuclear Research CSAV)

Card 1/2

L 56705-65

ACCESSION NR: AP5018830

SUBMITTED: 00

ENCL: 00

SUB CODE: NP, OP

NR REF SOV: 000

OTHER: 000

JPRS

Card 2/2

FRANA, J.; REZANKA, I.; SPALEK, A.

Decay of Cs ^{134m}. Chekhosl fiz zhurnal 14 no.9:678-682 '64.

1. Institute of Nuclear Research, Czechoslovak Academy of Sciences, Rez.

L 56707-65 EWP(t)/EWP(b) Feb DIAAP/IJP(c) JD/JG
ACCESSION NR: AP5018831 CZ/0038/64/010/008/0292/0292

AUTHOR: Frana, Jiri; Rezanka, Ivan; Spalek, Antonin;

TITLE: Decay of Cs^{134m} 19

SOURCE: Jaderna energie, v. 10, no. 8, 1964, 292

TOPIC TAGS: cesium, radioisotope, radioactive decay, radioactive decay scheme

Abstract: Decay of isomeric state of Cs 134 was studied. T 1/2 of 2.93 ± 0.05 hours was determined. Using a spectrometer with a short lens, scintillation measurements, and chemical separations it was possible to show the non-existence of weak beta decay. Max. intensity is 0.02% not 1% found in past publications. Spectrum of conversion electrons was measured by a double-focus-ing spectrometer, and the following transition energies were found: 127.3 ± 0.3 keV (E3) and 138.4 ± 0.4 keV (M4). K:L:M+N

Card 1/2

L 56707-65

ACCESSION NR: AP5018831

is 92:100:27 for the 127.3 keV transition, and 206:100:31 for the 138.4 keV transition. Conversion coefficient of the 127.3 keV transition was measured, resulting in a value of alpha K = 2.55 ± 0.4 . The ratio of transition intensities is $I_{138}: I_{137} = 5.7 : 1000$. The article is an abstract of report No UJ No 1018/64.

ASSOCIATION: Ustav Jaderneho vyzkumu CSAV, Rez (Institute of Nuclear Research, CSAV)

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR RIF SOV: 000

OTHER: 000

JPRS

Card

2/2

S/048/62/026/001/014/018
B125/B104

AUTHORS:

Rzhezanka, I., Frana, Ya., Adam, I., and Peker, L.

TITLE:

The rotational nature of the isomeric level of $^{176}_{71}\text{Lu}$
($T_{1/2} = 3.7$ hrs)

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,
no. 1, 1962, 127 - 130

TEXT: For the isomer Lu^{176*} with $I = 1$ it follows from its decay scheme that $K = 0$, which proves that the isomeric ionization level of $^{176}_{71}\text{Lu}$ is the rotational level with $I = 0$ and $K = 0$, and that the ground state of the band with $I = 0$ is higher. The oxide of the isomer Lu^{176*} obtained by bombarding spectroscopically pure Lu_2O_3 with thermal neutrons (10^{13} neutrons $\text{cm}^{-2} \text{sec}^{-1}$) was converted to its chloride. The β^- -spectrum of Lu^{176*} , which was irradiated in a reactor for 20 hrs, was measured with a resolution of 2% . The electrons were recorded by an anthracene scintillation counter. This was done with particular care in the

Card 1/4

APPROVED FOR RELEASE

S/048/62/026/001/014/018
B125/B104

The rotational nature of...

neighborhood of the limiting energy.. With a sufficiently strong source, the Curie diagram showed a distinct break in the hard region of the spectrum. The β^- -spectrum falls into two components with the limiting energies $E_{\beta_1} = 1314 \pm 8$ and $E_{\beta_2} = 1222 \pm 10$ kev. The relative intensities

are $35 \pm 10\%$ and $65 \pm 10\%$. Some lines of the conversion electron spectrum

of Lu^{176*} irradiated in a reactor for 3 hrs, which were recorded on an electrolytically prepared sample, correspond to the conversion of the 88-kev gamma transition to the K-, ($L_I + L_{II}$)-, L_{III} -, M-, and N-subshells.

The relative intensity of the sqft component of the β^- -spectrum amounts to $I_{\beta_2} = 52 \pm 6\%$. The 0-kev (0^+) and 88-kev (2^+) beta transitions to the

Hf^{176^2} levels, which belong to the same rotational band with $K = 0^+$, have the same multipolarity $L = 1$ because of the spin 1 of the isomer Lu^{176*} . The ratio of reduced probabilities ft for such transitions is expressed by the ratio of the corresponding Clebsch-Gordan coefficients:

$$\frac{(f)_{2^+}}{(f)_{0^+}} = \frac{\langle I_1 L K_1 K_1 - K_1 | I_1 K_1 I_1 K_1 \rangle^2}{\langle I_1 L K_1 K_1 - K_1 | I_1 K_1 I_1 K_1 \rangle^2}$$

Card 2/4

The rotational nature of...

S/048/62/026/001/014/018

B125/B104

where K_{f_1} and K_{f_2} denote the values of K for the two final states. For

$K_i = 0$ one finds $(ft)_{2+}/(ft)_{0+} = 0.5$, and for $K_i = 1$ one has $(ft)_{2+}/(ft)_{0+} = 2$.

From the energies and intensities of the two beta transitions obtained here, it finally follows that $(ft)_{2+}/(ft)_{0+} \sim 0.56$. The isomeric level of

$^{176}_{71}\text{Lu}$ with $I = 1$ thus has the value $K = 0$, and L. K. Peker's hypothesis (Doklad na X soveshchani po yadernoy spektroskopii (Report at the 10th Congress on Nuclear Spectroscopy), Moscow, January 1960, on the rotational nature of this isomeric level is confirmed. Zd. Playner from the Institute of Nuclear Research of the Czechoslovakian AS is thanked for making possible measurements with a double-focusing spectrometer. There are 2 figures and 14 references: 4 Soviet-bloc and 10 non-Soviet-bloc. The four most recent references to English-language publications read as follows: White M. B., Alpert S. S., Lipworth E., Bull. Amer. Phys. Soc., 5, 273 (1960); Harmatz B., Handley T. H., Mihelich J. W., Phys. Rev., 119, 1345 (1960); Chupp E. L., Dumond J. W. M., Gordon F. J., Jopson R. C., Mark H., Bull. Amer. Phys.

Card 3/4

The rotational nature of...

S/048/62/026/001/014/018
B125/B104

Soc., 3, 55 (1958); Rose M. E., Internal Conversion Coefficients. Amsterdam, 1958.

ASSOCIATION: Institute of Nuclear Research of the Czechoslovakian AS. ✓
Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo
gos. universiteta im. A. A. Zhdanova (Scientific Research
Institute of Physics of the Leningrad State University imeni
A. A. Zhdanov)

Card 4/4

FRANASZCZAK, I.

FRANSECKI, I.

A general program for training personnel in industrial safety and hygiene factories.
(to be contd.)

p. 4 (Ochrona Pracy; Bezpieczenstwo I Higiena Pracy. Vol. 10, no. 6, June 1956.
Warszawa, Poland)

Monthly Index of East European Accessions (EEAI) IC. Vol. 7, no. 2,
February 1958

FRANASZCZUK, L.; Filipkowski, S.

A general program for training personnel in industrial safety and hygiene in factories. (Conclusion) p. 10.

(OCHRONA PRACY; BEZPIECZENSTWO I HIGIENA PRACY. Vol. 10, no. 7, July 1956, Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957, Uncl.

FRANASZCZYK, R.

460. Bean hydrolysate medium for cultivation of *Haemophilus pertussis*. J. Iskierko, M. Sabbo, and R. Franaszczyk *Acta microbiol. polon.*, 1955, 4, 61-63.—In the medium for the cultivation of *H. pertussis* the casein hydrolysate could be replaced by bean-hydrolysate. The total N and amino-N in Cohen-Wheeler medium and in the medium with bean-hydrolysate were measured. The growth of *H. pertussis* on the new medium was as good as on the Cohen-Wheeler medium. No changes in morphological and antigenic characteristics of the bacteria were noted. The vaccine prepared on the new medium was tested.

B. VINEY.

MD

(2)

L 23941-66 EWA(h)

ACC NR: AP6011816

SOURCE CODE: PO/0019/66/015/001/0039/0050

AUTHOR: Franaszek, M.

ORG: Department of Mining Electrical Technology of the Academy of Mining and Metallurgy (Katedra Elektrotechniki Gorniczej Akademii Gorniczo-Hutniczej)

TITLE: Phase-sensitive magnetic element and its application

SOURCE: Archiwum elektrotechniki, v. 15, no. 1, 1966, 39-40

TOPIC TAGS: magnetic element, electromagnetic field, amplitude, modulation, automatic frequency control, mercury, voltage regulation, phase modulation

ABSTRACT: The use of a three-legged core with three independent windings as a sensitive element is suggested by the author. Terminal windings are fed alternating voltage of uniform amplitude and frequency. The phase difference is inconstant. Electromotive force excitation in the middle winding depends on phase difference. Formulation of modulus and phase of the output voltage is given. The phase-sensitive element can be used in automatic-control and measuring equipment. An automatic-control system for the power coefficient of a synchronous motor is presented. On the basis of the phase-sensitive element, the phase meter can be used for determining difference of two alternating voltages. On the basis of geometrical summation of two alternating voltages, a diagram is developed for an automatic control of amplitude

Card 1/2

UDC: 621.3.042:621.316.727

L 23941-66

ACC NR: AP6011816

of voltage, feeding a mercury conductor. Voltage regulation is carried out with the aid of the phase inverter. Orig. art has: 19 figures and 27 formulas. [Based on author's abstract] [NT]

SUB CODE: 20/ SUBM DATE: 23Feb64/ ORIG REF: 001/ Oth ref: 001

Card 2/2 *RV*

ACC NR: AP6019816

(A)

SOURCE CODE: PO/0021/66/000/002/0071/0074

AUTHOR: Franaszek, Mieczyslaw (Dr., Engineer)

ORG: The Mining-Metallurgy Academy, Department of Mining Electrical Engineering
(Akademia Gorniczo-Hutnicza, Katedra Elektrotechniki Gorniczej)

TITLE: Phase meter with a geometrical summator

SOURCE: Przegląd elektrotechniczny, no. 2, 1966, 71-74

TOPIC TAGS: phase meter, ~~adder~~, ~~geometry~~ RC circuit

ABSTRACT: The article reports on a phase meter with a geometric summator which was designed, developed and built under the author's direction in collaboration with J. Duda at the Department of Mining Electrical Engineering of the Mining-Metallurgy Academy. The device has been patented and bears the patent number P-106607, AGH Krakow 1964. The phase meter is designed for measuring the angle of phase shift between two sinusoidal alternating voltages of the same amplitude and frequency, and has a measurement range of 0° to 360°. The use of an RC circuit makes it possible to determine the rotation sequence of the vectors of the measured voltages and by switching the polarity of one of the coils a scale of having closely grouped or congested

Card 1/2

abc: 621.317.77

ACC NR:AP6019816

divisions is avoided. The electromagnetic phase meter can also be used for making measurements on low power systems and devices. It has a power consumption not exceeding several hundredths of a volt-ampere. Orig. art. has: 8 figures and 19 formulas.

SUB CODE: 09/ SUBM DATE: none

Card 2/2

FRANASZEK, Mieczyslaw

Static phase shifters with extended phase angle. Archiw gorn
9 no.2:243-262 '64.

FRANASZEK, Mieczyslaw, dr inż.

Contactless magnetic elements, Wiad elektrotechn 32 no.2:33-35
P '65.

1. Department of Mining Electrical Engineering of the School
of Mining and Metallurgy, Krakow.

FRANC, Alexandr

How to save one per cent of fuel and power. Energetika Gz 11 no.10:511
0 '61.

FRANC, Alexandr

Fluoresceine, a dye for water used in water heating systems.
Energetika Cz 12 no.5:278 My '62.

SVOBODA, Viktor, inz.; VANA, Ladislav; FRANC, Alexandr

Effect of the electric power saving in industrial enterprises
on the consumption of solid fuels. Energetika Cz 13 no.7:375
Jl '63.

1. Odbytove sdruzeni paliv, Praha.

FRANC, B.

Metal plug for the bacteriological test tube as the carrier of the smear tampon. Cesk. epidem. 14 no.5:318 S '65.

1. Mikrobiologicke oddeleni Okresni hygienicko-epidemiologicke stanice, Pardubice.

FRANC, F.

7
 Chromatography of organic compounds. III. Identification of aromatic compounds by means of chromatographic spectra. F. Franc and Z. Stránský (Výzkumný ústav organ. synt., Pardubice-Rybitví, Czech.). Collection Czechoslov. Chem. Commun. 24, 3611-23(1959)(in German); cf. C.A. 54, 242c.—A method is described based on paper chromatographic analysis of the investigated compd. or mixt. in a series of 12 given systems of stationary and mobile phases under standardized conditions. The obtained R_f values plotted in a fixed sequence in a graph give a curve of the so called "chromatographic spectrum" which is characteristic for each individual compd. Color spots and the "spectra" of 53 aromatic compds. are charted and the relationships between the form of the curve and the chem. constitution are discussed at great length. Standardized procedures for the necessary operations are described and reasons for oscillations of the R_f values are pointed out. The method has good reproducibility ($\pm 0.01 R_f$) and is independent of the concn. of the spotted compd. in a broad range. The form of the "chromatographic spectrum" curves permits conclusions to be drawn with regard to the constitution of new compds. The method cannot be used for compds. which
 4
 L. I. Určánek

FRANC, I.

Changes in the hydraulic properties of a turbine working under a variable head. p.104.
(Vodohospodarsky Casopis, Vol. 5, No. 2, 1957, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (SEAL) IC. Vol. 6, No. 9, Sept. 1957. Uncl.

FRANC, J.

Machinery and equipment for producing electric power at the 3d Exhibition of Engineering in Brno.

P. 417. (ENERGETIKA.) (Praha, Czechoslovakia) Vol. 7, No. 8, Aug. 1957

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, May 1958

FRANC, J.

"Food machinery and refreigeration technology. (Supplement)"p.3

PRUMYSL POTRAVIN. Praha, Czechoslovakia, Vol. 9, No. 5, May, 1958

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September, 1959
Uncl.

FRANC, J.

3. Determination of *o*-, *m*-, and *p*-cresol, and of phenol in commercial tricresol by partition chromatography on silica gel. Jaroslav Franc (Výzkumný ústav. org. syntesy, Pardu-bice-Rybníky, Czech.). Chem. Listy 48, 1520-31 (1954).—A detn. of *o*-, *m*-, and *p*-cresol, and of PhOH in com. tri-cresol contg. not more than 4% EtC₆H₄OH and xylenols is based on the sepn. of the 4 components on a column filled with silica gel satd. with H₂O. The components are eluted with cyclohexane, and their content in the eluates is detd. colorimetrically by the reaction with 2,6-dibromobenzo-quinone chlorimine with which *o*- and *m*-cresol and PhOH form blue indophenols. *p*-Cresol, which is eluted in the same fraction as *m*-cresol, does not react and is detd. by difference. M. Hudlický.

FRANC, J.

3470. Colorimetric determination of *m*-aminophenol in 4-aminosalicylic acid with 4-amino-phenazine, J. Franc (*Czechoslov. Farmaco.*, 1955, 4 (1), 4-6).—4-Aminophenazine (I) in alkaline solution

and in the presence of an oxidising agent gives a red coloration with *m*-aminophenol (II) which obeys the Beer-Lambert law in the concn. range used (0 to 6.2 mg in 60 ml). 4-Aminosalicylic acid (III) gives a similar coloration in weakly alkaline solutions, but this is suppressed by carrying out the reaction in 25 per cent. aq. NH₃ soln. Potassium ferricyanide was used as the oxidising agent, and the dependence of the extinction coefficient upon its concn. is shown by a graph. The solution for the colorimetric determination was prepared by taking 10 ml of a 0.4 per cent. aq. soln. of the III under examination, 10 ml of H₂O, 2 ml of 5 per cent. aq. I soln. and 6 ml of 2 per cent. K₃Fe(CN)₆ soln. and making up to 100 ml with 25 per cent. aq. NH₃ soln. The results for concn. of II up to 0.5 per cent. accord to within ± 10 per cent. with those obtained by extraction methods.

A. O. JAKUBOVIC

~~FRANC, JAROSLAV~~
FRANC, JAROSLAV

CZECH

✓ Determination of o-, m-, and p-cresol, and of phenol in commercial tricresol by partition chromatography on silica gel. Jaroslav Franc. Collection Czechoslov. Chem. Commun. 10, 288-292 (1955) (in German).—See C.A. 49, 1481b. B. J. C.

CH

MA
JAN

1. INDEX, JAROSLAV

3

CH ①

✓ Chromatography of aromatic isomers. I. Relation between the dipole moment and R_f value of benzene derivatives. Jaroslav Franc and Josef Latinák. *Collection Czechoslov. Chem. Commun.* 20, 817-24 (1955) (in German). II. A modification of the LeRosen equation. *Ibid.* 826-8. III. Relation between the dipole moment and R_f value of naphthalene derivatives. *Ibid.* 830-4. — See C.A. 49, 9362c. E. J. C.

MM 824

SIZE CH

VChromatography of aromatic isomers. I. Relation between the dipole moment and R_f value of benzene derivatives. Jaroslav Franc and Josef Latinský (Výzkumný ústav org. syntézy, Písek-Rybitví, Czech.). *Chem. Listy* 49, 317-318 (1954).—From the study of the relation between the dipole moment and chromatographic behavior of benzene isomers it follows that, by using the stationary polar phase, the compd. moves faster the lower its dipole moment. Empirically derived equations, $R_f = K - 0.1 \mu$ (for polar stationary phase) and $R_f = K + 0.1$ (for nonpolar stationary phase), allow the calcn. of R_f values for the other isomers from the measured value of R_f for one isomer. Exceptions were found with dihydroxy- and diamino-derivs. II. A modification of the LeRosen equation. *Ibid.* 325-7.—On the basis of the relation between the dipole moment and R_f value, the LeRosen equation (LeRosen, Carlton, and Moseley, *C.A.* 48, 2021a) was modified for benzene isomers to the form: $R_f = [1/(U + 1)] + 0.1 \Delta\mu$, where $\Delta\mu$ is the difference between the dipole moments of para and ortho or meta isomers. III. Relation between the dipole moment and R_f value of naphthalene derivatives. *Ibid.* 328-33.—The equation $R_f = K \pm 0.1 \mu$ holds approx. also for naphthalene derivs., the ortho-effect and H bond causing certain deviations. In the case of naphthalene-sulfonic acids, the dipole moment value must be decreased by 0.3 debye when SO₃H group is in 2- or 3-positions. M. Hudlický

~~FRANC, Jaroslav~~

4

CZECH

Chromatography of dye intermediates. IV. Paper chromatography of dinitrobenzenes, dinitronaphthalenes, and dinitroanthraquinones. Jaroslav Franc (Vědecký ústav org. syntézy, Pardubice, Czech.). Chem. Listy 49, 873-8 (1955); cf. C.A. 49, 12189g. — By using Whatman 4 paper soaked with petroleum, and a mixt. EtOH-H₂O-AcOH 20:14:1 as a mobile phase, dinitro derivs. of C₆H₄, C₁₀H₆, and anthraquinone were successfully sepd. after the detection in ultraviolet light, with fluorescein, or with Ehrlich reagent. With the exception of *o*-C₆H₄(NO₂)₂, the *R_f* values found coincide with those calcd. from the equation $R_f = K + 0.1 \mu$. *R_f* values of the following nitro-compds. are listed: *o*-dinitrobenzene 0.76, *m*-dinitrobenzene 0.50, 1-nitronaphthalene 0.33, 1,5-dinitronaphthalene 0.13, 1,8-dinitronaphthalene 0.00, 1,8-dinitroanthraquinone 0.43, 1-nitroanthraquinone 0.17, 1,5-dinitroanthraquinone 0.00, 1,8-dinitroanthraquinone 0.77, 1,7-dinitroanthraquinone 0.70, and anthraquinone 0.28. M. Hudlický

CII

82

7-11-61 5

4.4. The quantitative determination of cyclohexanone in technical methylcyclohexanone by chromatographic separation on silica gel. (Inst. Organ. Synthesis, Bratislava, Czechoslovakia), *Coll. Czech. Chem. Commun.* 1956 21 (3), 581-583. Cyclohexanone I is separated from the three isomeric methylcyclohexanones and the dimethylcyclohexanones by partition chromatography on silica gel with cyclohexane (II) as solvent, and is determined colorimetrically as the 2,4-dinitrophenylhydrazone. Even 20% of cyclohexanol does not interfere, but the apparent content of I in II diminishes with time and must therefore be standardized. An accuracy within $\pm 4\%$ is attainable. A 65 to 76-cm column is used and the flow rate is 180 ml per hour. P. S. STROSS

ckm

fm

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413530006-9

FRANC, TAROSTAY

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413530006-9"

FRANC, JAROSLAV

Determination of cyclohexanone in commercial methyl-
cyclohexanone by partition chromatography on silica gel.
Jaroslav Franc (Výzkumný ústav org. syntez, Pardubice,
Czech.). Chem. Listy 50, 73-6 (1955). To det.
cyclohexanone (I) in com. methylcyclohexanone (II) a 1-ang.
sample dissolved in 5 ml. cyclohexane (III) is chromato-
graphed over 100 g. silica gel in a 65-75-cm. column in a sys-
tem III-H₂O, all 5-ml. fractions contg. I (according to an in-
formative chromatogram) are collected and mixed with an
equal vol. of EtOH in a 250-ml. volumetric flask, the soln.
heated with 5 ml. alc. HCl (prepd. by dilg. 1 ml. concd. HCl
to 100 ml. with abs. EtOH) and 5 ml. 0.05% alc. soln. of
2,4-dinitrophenylhydrazine 60 min. at 60°, treated after
cooling with 2 ml. 10% KOH in abs. EtOH, filled to the
mark, and detd. colorimetrically with a filter with max.
absorption at 480 mμ. The mixt. of the 3 isomeric II is
eluted prior to I. Dimethylcyclohexanones do not inter-
fere. The analysis lasts 6 hrs. and has an av. error of ±4%.
M. Hudlický

MA 94

FRANC, J.

FRANC, J. Chromatography of aromatic isomers. IV. Relationship between dipole moment and R_f value in homologous series. p. 373. Vol. 50, no. 3, Mar. 1956. CHEMICKÉ LISTY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

~~JAROSLAV FRANC~~
FRANC, OTAROSLAV
USSR/Analysis of Organic Substances.

G-3

APPROVED FOR RELEASE: 06/13/2000, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, 2006-2007, 2008-2009, 2010-2011, 2012-2013, 2014-2015, 2016-2017, 2018-2019, 2020-2021, 2022-2023, 2024-2025, 2026-2027, 2028-2029, 2030-2031, 2032-2033, 2034-2035, 2036-2037, 2038-2039, 2040-2041, 2042-2043, 2044-2045, 2046-2047, 2048-2049, 2050-2051, 2052-2053, 2054-2055, 2056-2057, 2058-2059, 2060-2061, 2062-2063, 2064-2065, 2066-2067, 2068-2069, 2070-2071, 2072-2073, 2074-2075, 2076-2077, 2078-2079, 2080-2081, 2082-2083, 2084-2085, 2086-2087, 2088-2089, 2090-2091, 2092-2093, 2094-2095, 2096-2097, 2098-2099, 2100-2101, 2102-2103, 2104-2105, 2106-2107, 2108-2109, 2110-2111, 2112-2113, 2114-2115, 2116-2117, 2118-2119, 2120-2121, 2122-2123, 2124-2125, 2126-2127, 2128-2129, 2130-2131, 2132-2133, 2134-2135, 2136-2137, 2138-2139, 2140-2141, 2142-2143, 2144-2145, 2146-2147, 2148-2149, 2150-2151, 2152-2153, 2154-2155, 2156-2157, 2158-2159, 2160-2161, 2162-2163, 2164-2165, 2166-2167, 2168-2169, 2170-2171, 2172-2173, 2174-2175, 2176-2177, 2178-2179, 2180-2181, 2182-2183, 2184-2185, 2186-2187, 2188-2189, 2190-2191, 2192-2193, 2194-2195, 2196-2197, 2198-2199, 2200-2201, 2202-2203, 2204-2205, 2206-2207, 2208-2209, 2210-2211, 2212-2213, 2214-2215, 2216-2217, 2218-2219, 2220-2221, 2222-2223, 2224-2225, 2226-2227, 2228-2229, 2230-2231, 2232-2233, 2234-2235, 2236-2237, 2238-2239, 2240-2241, 2242-2243, 2244-2245, 2246-2247, 2248-2249, 2250-2251, 2252-2253, 2254-2255, 2256-2257, 2258-2259, 2260-2261, 2262-2263, 2264-2265, 2266-2267, 2268-2269, 2270-2271, 2272-2273, 2274-2275, 2276-2277, 2278-2279, 2280-2281, 2282-2283, 2284-2285, 2286-2287, 2288-2289, 2290-2291, 2292-2293, 2294-2295, 2296-2297, 2298-2299, 2300-2301, 2302-2303, 2304-2305, 2306-2307, 2308-2309, 2310-2311, 2312-2313, 2314-2315, 2316-2317, 2318-2319, 2320-2321, 2322-2323, 2324-2325, 2326-2327, 2328-2329, 2330-2331, 2332-2333, 2334-2335, 2336-2337, 2338-2339, 2340-2341, 2342-2343, 2344-2345, 2346-2347, 2348-2349, 2350-2351, 2352-2353, 2354-2355, 2356-2357, 2358-2359, 2360-2361, 2362-2363, 2364-2365, 2366-2367, 2368-2369, 2370-2371, 2372-2373, 2374-2375, 2376-2377, 2378-2379, 2380-2381, 2382-2383, 2384-2385, 2386-2387, 2388-2389, 2390-2391, 2392-2393, 2394-2395, 2396-2397, 2398-2399, 2400-2401, 2402-2403, 2404-2405, 2406-2407, 2408-2409, 2410-2411, 2412-2413, 2414-2415, 2416-2417, 2418-2419, 2420-2421, 2422-2423, 2424-2425, 2426-2427, 2428-2429, 2430-2431, 2432-2433, 2434-2435, 2436-2437, 2438-2439, 2440-2441, 2442-2443, 2444-2445, 2446-2447, 2448-2449, 2450-2451, 2452-2453, 2454-2455, 2456-2457, 2458-2459, 2460-2461, 2462-2463, 2464-2465, 2466-2467, 2468-2469, 2470-2471, 2472-2473, 2474-2475, 2476-2477, 2478-2479, 2480-2481, 2482-2483, 2484-2485, 2486-2487, 2488-2489, 2490-2491, 2492-2493, 2494-2495, 2496-2497, 2498-2499, 2500-2501, 2502-2503, 2504-2505, 2506-2507, 2508-2509, 2510-2511, 2512-2513, 2514-2515, 2516-2517, 2518-2519, 2520-2521, 2522-2523, 2524-2525, 2526-2527, 2528-2529, 2530-2531, 2532-2533, 2534-2535, 2536-2537, 2538-2539, 2540-2541, 2542-2543, 2544-2545, 2546-2547, 2548-2549, 2550-2551, 2552-2553, 2554-2555, 2556-2557, 2558-2559, 2560-2561, 2562-2563, 2564-2565, 2566-2567, 2568-2569, 2570-2571, 2572-2573, 2574-2575, 2576-2577, 2578-2579, 2580-2581, 2582-2583, 2584-2585, 2586-2587, 2588-2589, 2590-2591, 2592-2593, 2594-2595, 2596-2597, 2598-2599, 2600-2601, 2602-2603, 2604-2605, 2606-2607, 2608-2609, 2610-2611, 2612-2613, 2614-2615, 2616-2617, 2618-2619, 2620-2621, 2622-2623, 2624-2625, 2626-2627, 2628-2629, 2630-2631, 2632-2633, 2634-2635, 2636-2637, 2638-2639, 2640-2641, 2642-2643, 2644-2645, 2646-2647, 2648-2649, 2650-2651, 2652-2653, 2654-2655, 2656-2657, 2658-2659, 2660-2661, 2662-2663, 2664-2665, 2666-2667, 2668-2669, 2670-2671, 2672-2673, 2674-2675, 2676-2677, 2678-2679, 2680-2681, 2682-2683, 2684-2685, 2686-2687, 2688-2689, 2690-2691, 2692-2693, 2694-2695, 2696-2697, 2698-2699, 2700-2701, 2702-2703, 2704-2705, 2706-2707, 2708-2709, 2710-2711, 2712-2713, 2714-2715, 2716-2717, 2718-2719, 2720-2721, 2722-2723, 2724-2725, 2726-2727, 2728-2729, 2730-2731, 2732-2733, 2734-2735, 2736-2737, 2738-2739, 2740-2741, 2742-2743, 2744-2745, 2746-2747, 2748-2749, 2750-2751, 2752-2753, 2754-2755, 2756-2757, 2758-2759, 2760-2761, 2762-2763, 2764-2765, 2766-2767, 2768-2769, 2770-2771, 2772-2773, 2774-2775, 2776-2777, 2778-2779, 2780-2781, 2782-2783, 2784-2785, 2786-2787, 2788-2789, 2790-2791, 2792-2793, 2794-2795, 2796-2797, 2798-2799, 2800-2801, 2802-2803, 2804-2805, 2806-2807, 2808-2809, 2810-2811, 2812-2813, 2814-2815, 2816-2817, 2818-2819, 2820-2821, 2822-2823, 2824-2825, 2826-2827, 2828-2829, 2830-2831, 2832-2833, 2834-2835, 2836-2837, 2838-2839, 2840-2841, 2842-2843, 2844-2845, 2846-2847, 2848-2849, 2850-2851, 2852-2853, 2854-2855, 2856-2857, 2858-2859, 2860-2861, 2862-2863, 2864-2865, 2866-2867, 2868-2869, 2870-2871, 2872-2873, 2874-2875, 2876-2877, 2878-2879, 2880-2881, 2882-2883, 2884-2885, 2886-2887, 2888-2889, 2890-2891, 2892-2893, 2894-2895, 2896-2897, 2898-2899, 2900-2901, 2902-2903, 2904-2905, 2906-2907, 2908-2909, 2910-2911, 2912-2913, 2914-2915, 2916-2917, 2918-2919, 2920-2921, 2922-2923, 2924-2925, 2926-2927, 2928-2929, 2930-2931, 2932-2933, 2934-2935, 2936-2937, 2938-2939, 2940-2941, 2942-2943, 2944-2945, 2946-2947, 2948-2949, 2950-2951, 2952-2953, 2954-2955, 2956-2957, 2958-2959, 2960-2961, 2962-2963, 2964-2965, 2966-2967, 2968-2969, 2970-2971, 2972-2973, 2974-2975, 2976-2977, 2978-2979, 2980-2981, 2982-2983, 2984-2985, 2986-2987, 2988-2989, 2990-2991, 2992-2993, 2994-2995, 2996-2997, 2998-2999, 3000-3001, 3002-3003, 3004-3005, 3006-3007, 3008-3009, 3010-3011, 3012-3013, 3014-3015, 3016-3017, 3018-3019, 3020-3021, 3022-3023, 3024-3025, 3026-3027, 3028-3029, 3030-3031, 3032-3033, 3034-3035, 3036-3037, 3038-3039, 3040-3041, 3042-3043, 3044-3045, 3046-3047, 3048-3049, 3050-3051, 3052-3053, 3054-3055, 3056-3057, 3058-3059, 3060-3061, 3062-3063, 3064-3065, 3066-3067, 3068-3069, 3070-3071, 3072-3073, 3074-3075, 3076-3077, 3078-3079, 3080-3081, 3082-3083, 3084-3085, 3086-3087, 3088-3089, 3090-3091, 3092-3093, 3094-3095, 3096-3097, 3098-3099, 3100-3101, 3102-3103, 3104-3105, 3106-3107, 3108-3109, 3110-3111, 3112-3113, 3114-3115, 3116-3117, 3118-3119, 3120-3121, 3122-3123, 3124-3125, 3126-3127, 3128-3129, 3130-3131, 3132-3133, 3134-3135, 3136-3137, 3138-3139, 3140-3141, 3142-3143, 3144-3145, 3146-3147, 3148-3149, 3150-3151, 3152-3153, 3154-3155, 3156-3157, 3158-3159, 3160-3161, 3162-3163, 3164-3165, 3166-3167, 3168-3169, 3170-3171, 3172-3173, 3174-3175, 3176-3177, 3178-3179, 3180-3181, 3182-3183, 3184-3185, 3186-3187, 3188-3189, 3190-3191, 3192-3193, 3194-3195, 3196-3197, 3198-3199, 3200-3201, 3202-3203, 3204-3205, 3206-3207, 3208-3209, 3210-3211, 3212-3213, 3214-3215, 3216-3217, 3218-3219, 3220-3221, 3222-3223, 3224-3225, 3226-3227, 3228-3229, 3230-3231, 3232-3233, 3234-3235, 3236-3237, 3238-3239, 3240-3241, 3242-3243, 3244-3245, 3246-3247, 3248-3249, 3250-3251, 3252-3253, 3254-3255, 3256-3257, 3258-3259, 3260-3261, 3262-3263, 3264-3265, 3266-3267, 3268-3269, 3270-3271, 3272-3273, 3274-3275, 3276-3277, 3278-3279, 3280-3281, 3282-3283, 3284-3285, 3286-3287, 3288-3289, 3290-3291, 3292-3293, 3294-3295, 3296-3297, 3298-3299, 3300-3301, 3302-3303, 3304-3305, 3306-3307, 3308-3309, 3310-3311, 3312-3313, 3314-3315, 3316-3317, 3318-3319, 3320-3321, 3322-3323, 3324-3325, 3326-3327, 3328-3329, 3330-3331, 3332-3333, 3334-3335, 3336-3337, 3338-3339, 3340-3341, 3342-3343, 3344-3345, 3346-3347, 3348-3349, 3350-3351, 3352-3353, 3354-3355, 3356-3357, 3358-3359, 3360-3361, 3362-3363, 3364-3365, 3366-3367, 3368-3369, 3370-3371, 3372-3373, 3374-3375, 3376-3377, 3378-3379, 3380-3381, 3382-3383, 3384-3385, 3386-3387, 3388-3389, 3390-3391, 3392-3393, 3394-3395, 3396-3397, 3398-3399, 3400-3401, 3402-3403, 3404-3405, 3406-3407, 3408-3409, 3410-3411, 3412-3413, 3414-3415, 3416-3417, 3418-3419, 3420-3421, 3422-3423, 3424-3425, 3426-3427, 3428-3429, 3430-3431, 3432-3433, 3434-3435, 3436-3437, 3438-3439, 3440-3441, 3442-3443, 3444-3445, 3446-3447, 3448-3449, 3450-3451, 3452-3453, 3454-3455, 3456-3457, 3458-3459, 3460-3461, 3462-3463, 3464-3465, 3466-3467, 3468-3469, 3470-3471, 3472-3473, 3474-3475, 3476-3477, 3478-3479, 3480-3481, 3482-3483, 3484-3485, 3486-3487, 3488-3489, 3490-3491, 3492-3493, 3494-3495, 3496-3497, 3498-3499, 3500-3501, 3502-3503, 3504-3505, 3506-3507, 3508-3509, 3510-3511, 3512-3513, 3514-3515, 3516-3517, 3518-3519, 3520-3521, 3522-3523, 3524-3525, 3526-3527, 3528-3529, 3530-3531, 3532-3533, 3534-3535, 3536-3537, 3538-3539, 3540-3541, 3542-3543, 3544-3545, 3546-3547, 3548-3549, 3550-3551, 3552-3553, 3554-3555, 3556-3557, 3558-3559, 3560-3561, 3562-3563, 3564-3565, 3566-3567, 3568-3569, 3570-3571, 3572-3573, 3574-3575, 3576-3577, 3578-3579, 3580-3581, 3582-3583, 3584-3585, 3586-3587, 3588-3589, 3590-3591, 3592-3593, 3594-3595, 3596-3597, 3598-3599, 3600-3601, 3602-3603, 3604-3605, 3606-3607, 3608-3609, 3610-3611, 3612-3613, 3614-3615, 3616-3617, 3618-3619, 3620-3621, 3622-3623, 3624-3625, 3626-3627, 3628-3629, 3630-3631, 3632-3633, 3634-3635, 3636-3637, 3638-3639, 3640-3641, 3642-3643, 3644-3645, 3646-3647, 3648-3649, 3650-3651, 3652-3653, 3654-3655, 3656-3657, 3658-3659, 3660-3661, 3662-3663, 3664-3665, 3666-3667, 3668-3669, 3670-3671, 3672-3673, 3674-3675, 3676-3677, 3678-3679, 3680-3681, 3682-3683, 3684-3685, 3686-3687, 3688-3689, 3690-3691, 3692-3693, 3694-3695, 3696-3697, 3698-3699, 3700-3701, 3702-3703, 3704-3705, 3706-3707, 3708-3709, 3710-3711, 3712-3713, 3714-3715, 3716-3717, 3718-3719, 3720-3721, 3722-3723, 3724-3725, 3726-3727, 3728-3729, 3730-3731, 3732-3733, 3734-3735, 3736-3737, 3738-3739, 3740-3741, 3742-3743, 3744-3745, 3746-3747, 3748-3749, 3750-3751, 3752-3753, 3754-3755, 3756-3757, 3758-3759, 3760-3761, 3762-3763, 3764-3765, 3766-3767, 3768-3769, 3770-3771, 3772-3773, 3774-3775, 3776-3777, 3778-3779, 3780-3781, 3782-3783, 3784-3785, 3786-3787, 3788-3789, 3790-3791, 3792-3793, 3794-3795, 3796-3797, 3798-3799, 3800-3801, 3802-3803, 3804-3805, 3806-3807, 3808-3809, 3810-3811, 3812-3813, 3814-3815, 3816-3817, 3818-3819, 3820-3821, 3822-3823, 3824-3825, 3826-3827, 3828-3829, 3830-3831, 3832-3833, 3834-3835, 3836-3837, 3838-3839, 3840-3841, 3842-3843, 3844-3845, 3846-3847, 3848-3849, 3850-3851, 3852-3853, 3854-3855, 3856-3857, 3858-3859, 3860-3861, 3862-3863, 3864-3865, 3866-3867, 3868-3869, 3870-3871, 3872-3873, 3874-3875, 3876-3877, 3878-3879, 3880-3881, 3882-3883, 3884-3885, 3886-3887, 3888-3889, 3890-3891, 3892-3893, 3894-3895, 3896-3897, 3898-3899, 3900-3901, 3902-3903, 3904-3905, 3906-3907, 3908-3909, 3910-3911, 3912-3913, 3914-3915, 3916-3917, 3918-3919, 3920-3921, 3922-3923, 3924-3925, 3926-3927, 3928-3929, 3930-3931, 3932-3933, 3934-3935, 3936-3937, 3938-3939, 3940-3941, 3942-3943, 3944-3945, 3946-3947, 3948-3949, 3950-3951, 3952-3953, 3954-3955, 3956-3957, 3958-3959, 3960-3961, 3962-3963, 3964-3965, 3966-3967, 3968-3969, 3970-3971, 3972-3973, 3974-3975, 3976-3977, 3978-3979, 3980-3981, 3982-3983, 3984-3985, 3986-3987, 3988-3989, 3990-3991, 3992-3993, 3994-3995, 3996-3997, 3998-3999, 4000-4001, 4002-4003, 4004-4005, 4006-4007, 4008-4009, 4010-4011, 4012-4013, 4014-4015, 4016-4017, 4018-4019, 4020-4021, 4022-4023, 4024-4025, 4026-4027, 4028-4029, 4030-4031, 4032-4033, 4034-4035, 4036-4037, 4038-4039, 4040-4041, 4042-4043, 4044-4045, 4046-4047, 4048-4049, 4050-4051, 4052-4053, 4054-4055, 4056-4057, 4058-4059, 4060-4061, 4062-4063, 4064-4065, 4066-4067, 4068-4069, 4070-4071, 4072-4073, 4074-4075, 4076-4077, 4078-4079, 4080-4081, 4082-4083, 4084-4085, 4086-4087, 4088-4089, 4090-4091, 4092-4093, 4094-4095, 4096-4097, 4098-4099, 4100-4101, 4102-4103, 4104-4105, 4106-4107, 4108-4109, 4110-4111, 4112-4113, 4114-4115, 4116-4117, 4118-4119, 4120-4121, 4122-4123, 4124-4125, 4126-4127, 4128-4129, 4130-4131, 4132-4133, 4134-4135, 4136-4137

USSR/Analysis of Organic Substances.

G-3

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 19694

m-cresol and phenol are determined colorimetrically in discharging solutions (by the reaction with Gibbs's reagent). Phenols with substitutes in the n-position produce no color reaction with Gibbs's reagent, they are determined by difference. The correctness of the previously deducted relation (RZhKhim, 1956, 6544) between the values of R_F and the dipole moment was confirmed in respect to all separated isomers.

See report IV, RZhKhim, 1956, 77780.

Card 2/2

- 17 -

...ne, T

low

...the presence of ...
graphy
1959 50 (5) 1246-1248 ...
chromatography ...
detected with ...
The solvent
used is cyclohexane ...
Acetic acid ...
hydrolysis ...
capillary ...
separating ...
acid in ...
approximate ...
method ...
tion ...
group ...

Envy, J

FRANC, J.

"Determination of methyl- ϵ -caprolactams besides ϵ -caprolactam by means of paper chromatography. In German."

p. 218 (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNÍK
ČESKOSLOVATSKÝCH KEMIČESKÝCH PRÁCE. --Praha, Czechoslovakia.)
Vol. 22, No. 1, Feb. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

FRANC, J.

"Chromatography of aromatic isomers. VI. Intramolecular hydrogen bonding.
In German."

p. 995 (Collection of Czechoslovak Chemical Communications. Sbornik
Chekhoslovatskikh Khimicheskikh Rabot.) Vol. 22, no. 3, June 1957.
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

FRANC, J.; KNIZEK, J.

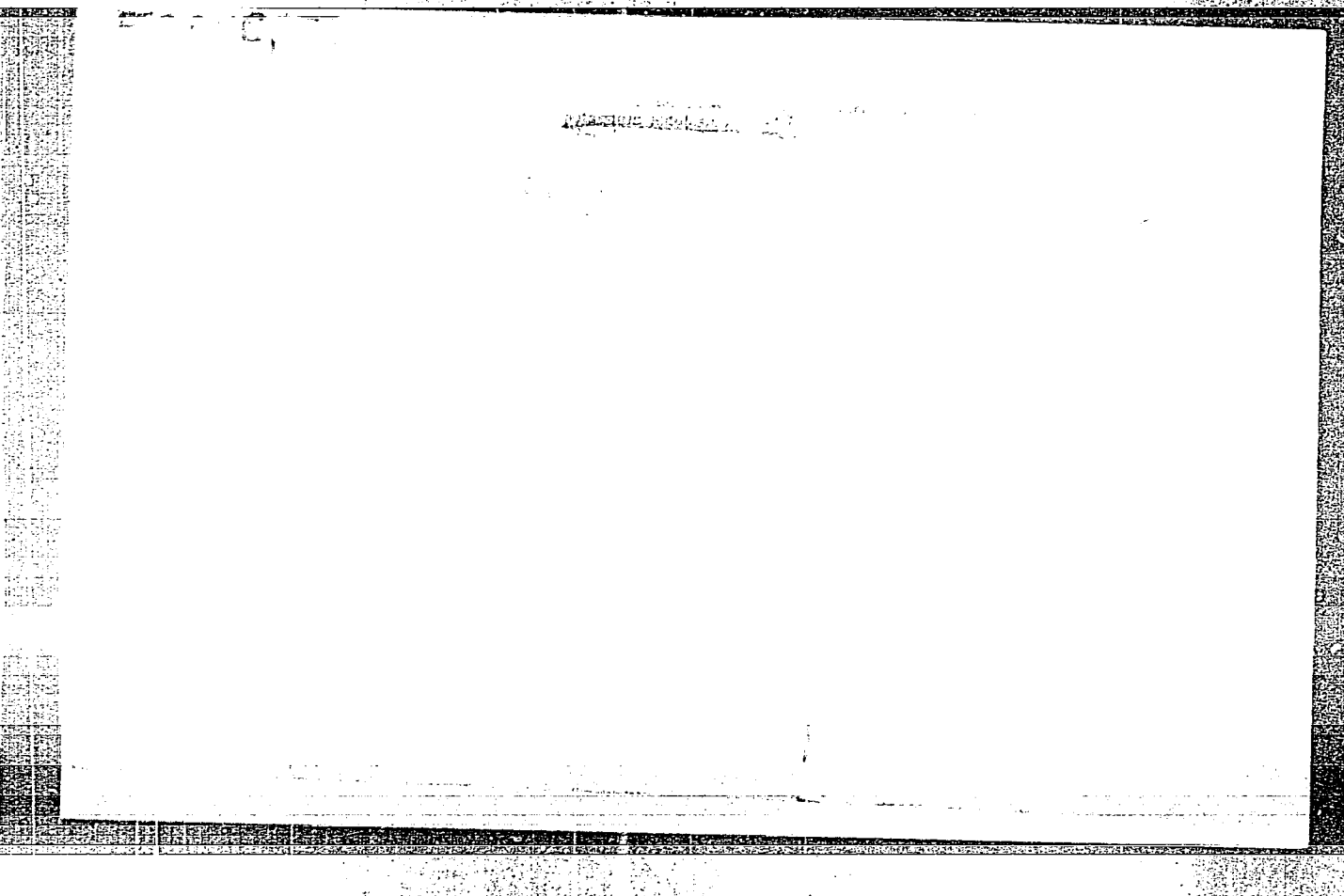
"Determination of ϵ -capro lactam by potassium iodobismuthate. In German."

p.1253 (Sbornik Chekhoslovatskikh Khimicheskikh Rabot, Vol. 22, no. 4,
Aug. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 8, August 1958

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413530006-9



APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413530006-9"

FRANC, JAROSLAV.

CZECHOSLOVAKIA/Analytical Chemistry - Analysis of Organic SubstancesE-3

Abs Jour : Ref Zhur - Khimiya, No 4, 1958, No 11058

Author : Jaroslav Franc

Inst : Not Given

Title : Chromatography of Aromatic Isomers. VI. Internal Hydrogen Bridges

Orig Pub : Che. listy, 1957, 51, No 1, 82-90; Sb. chekhsol. khim. ra-
bot, 1957, 12, No 3, 995-1005

Abstract : Discrepancies between the computed and experimental R_f values were often observed at paper chromatographing of aromatic substances; these discrepancies were attributed to the formation of hydrogen bridges. The author studied the chromatographic behavior of O-, m- and n-aminobenzoic acids, 1- and 2-aminoanthraquinones, O-, m- and n-aminophenols, o-, m- and n-nitrophenols, 3- and 4-nitrophthalic acids, oxybenzaldehydes, oxybenzoic acids, phthalic acid and terephthalic acid in various solvent systems. The difference with respect to the computed R_f values proved to be the greatest in the case of

Card : 1/2

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000413530006-9"

Abs Jour : Ref Zhur - Khimiya, No 4, 1958, No 11058

aminobenzoic acids. An empirical equation for the computation of R_f values is proposed; this equation contains increments for various hydrogen bonds and gives results agreeing with experimental values. See report V in RZhKhim, 1957, 19694.

Card : 2/2

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of Organic Substances. E-3

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1036.

Author : Franc, J.

Inst : Not given.

Title : Chromatography of Aromatic Isomers. VII. The Separation of Certain Mono- and Di-Carboxylic Acids.

Orig Pub: Collect. czechosl. chem. commun., 1958, 23, No 4, 655-662.

Abstract: See R. Zh. Khim., 1958, 70637.

Card 1/1

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of E-3
Organic Substances.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1032.

Author : Franc, J., Jokl, J.

Inst : ~~Not given.~~

Title : Spectrochromatography. I. The Determination of
Isomeric Xylols by a Gas-Liquid Chromatography
Method.

Orig Pub: Chem. listy, 1958, 52, No 2, 276-282.

Abstract: A device is described which enables one to deter-
mine quantitatively such mixtures which cannot be
separated into all components chromatographically.
The separation can be accomplished by the above
device by combining gas-liquid chromatography with
UV spectrophotometry. Individual fractions leaving
the chromatograph with a carrier gas enter a sil-
ver coated glass cell equipped with quartz windows

Card 1/2

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of E-3
Organic Substances.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1032.

Abstract: through which the UV light from a hydrogen lamp passes to a monochromator adjusted to the absorption wave length of the components that are being identified. The light from the monochromator strikes a photoelectric amplifier, the impulses of which are registered on a recorder. The concentrations of individual components are usually determined by the absorption intensity of calibration curves. To determine the concentration of two compounds that are not separated chromatographically, the absorption is measured at two or more wave lengths. The equipment has been successfully used for the quantitative analysis of a xylol mixture in which the m- and the p- isomers are not separated chromatographically. -- K. Setinek.

Card 2/2

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of Organic Substances. E

Abs Jour: Ref Zhur-Khim, No 12, 1959, 42166.

Author : Franc, J.

Inst : Not given.

Title : Chromatography of Aromatic Isomers. VIII. Separation of Monoatomic Phenols by Means of Paper Chromatography.

Orig Pub: Collect. czechosl. chem. commun., 1958, 23, No 7, 1231-1236.

Abstract: No abstract. See Ref Zhur-Khim, No 2, 1959, 4395.

Card 1/1

FRANC, J.

"Chromatography of aromatic isomers. IX. Separation of some benzene mono- and tricar-boxylic acids by paper chromatography." (In German)

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS., Praha, Czechoslovakia,
Vol. 23, no. 11, Nov. 1959

Monthly list of EAST EUROPEAN ACCESSIONS (SEAI), LG, Vol. 8, No. 7, July 1959, Unclas.

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic Substances.

B-3

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, No 4395

Author : Franc, J.

Inst : Not given

Title : The Chromatography of Aromatic Isomers. VIII. The Resolution of Monoatomic [sic] Phenols by Paper Chromatography.

Orig Pub : Chem Listy, 52, 55-59 (1958)

Abstract : The resolution of monoatomic [mononuclear?] phenols by the method of descending chromatography on Whatmann No 4 paper impregnated a 20% alcoholic solution of formamide (I), acetamide (II), or diethylformamide (III) has been investigated; mixtures of cyclohexane and pyridine in various proportions are used in development. The substances are deposited on the paper in pyridine solutions and the individual phenols are detected on the chromatograms with the Pauli reagent.

Card 1/3

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic Substances.

E-3

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, No 4395

Abstract : R_f values have been determined for phenols; o-, m-, and p-cresol; 2,3-, 2,4-, 2,5-, 3,4-, and 3,5-dimethylphenol; and o-, m-, and p-ethylphenol and 3,5-methylethylphenol. The method can be used for the estimation of impurities of phenol homologs (up to 1-2%) in phenol. The best resolution of the phenols is obtained when I-III rather than water are used as the stationary phase because of the formation of stable intramolecular hydrogen bonds (H₂B) between the amide molecules and the phenols. In addition, the vapor pressures of I-III are many times smaller than the vapor pressure of water and as result the phenols are not volatilized from the paper. The effect of the strength of the intramolecular bonds on the chromatographic resolution has been investigated. The best resolutions are obtained with substances which form the largest

Card 2/3

CZECHOSLOVAKIA/Analytical Chemistry. Analysis of Organic
Substances.

E-3

Abs Jour : Ref Zhur - Khimiya, No 2, 1959, No 4395

number of HB and the strongest HB between the stationary phase
and the substances to be resolved (when the inverted phase
method is used, between the developing solvent and substances
to be resolved). For Communication VII, see RZhKhim, 1958,
No 70637. -- J. Vanecek.

Card 3/3

Country	: Czechoslovakia	E-3
Category	:	
Abs. Jour	:	45631
Author	: Franc, J.	
Institut.	: Not given	
Title	: The Chromatographic Separation of Aromatic Isomers. IX. The Separation of Some Benzene Mono- and Tri- carboxylic Acids by Paper Chromatography.	
Orig. Pub.	: Chem Listy, 52, No 6, 1108-1112 (1958)	
Abstract	: Attempts to carry out a direct separation of o-, m-, and p-toluic acids, hemellitic acid, trimesic acid, and trimellitic acid by descending chroma- tography on Whatmann No 4 paper with a mixture of n-butyl alcohol, pyridine, and water (3 : 1 : 1) did not give satisfactory results because of the close R_f values of the isomers which result from the nearly identical dipole moments. The individ- ual acids were developed on the chromatogram with a 0.5% solution of $AgNO_3$ and (after drying) a	

Card: 1/4

Country : Czechoslovakia
Category :

E-3

Abs. Jour :

45631

Author :
Institut. :
Title :

Orig Pub. :

Abstract : saturated solution of thiosemicarbazine, containing NH_3 . Following heating of the paper to 100° for 1-2 min, the acid zones appear as white spots on a reddish-brown background. The tricarboxylic acids are also developed by spraying with a 4% solution of p-dimethylaminobenzaldehyde in $(\text{CH}_3\text{CO})_2\text{O}$ containing small amounts of anhydrous Na acetate (RZhKhimKh, No 21, 1956, 19757). The tricarboxylic acids resolution is markedly improved by the conversion of the acids to the nitro derivative.

Card: 2/4

Country : Czechoslovakia
Category :

E-2

Abs. Jour :

45631

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : The conversion is carried out by treating 0.1 gm of acid with 3 ml of nitrating mixture (2 parts conc H_2SO_4 + 1 part fuming HNO_3) at 80° for 15 min or at 100° for 4 or 7 hrs [sic]. The mixtures of nitro acids obtained are diluted with water to 5 ml, neutralized with 3 ml pyridine, and deposited on Whatmann No 1 paper. The chromatograms are developed by the descending method with a 5 : 3 : 3 mixture of n-butyl alcohol-pyridine-water or a 1 : 1 : 1 : 1 mixture of isoamyl alcohol-ethyl alcohol-water-pyridine. The nitro acids are

Card: 3/4

Country : Czechoslovakia
Category :

E-3

Abs. Jour :

45631

Author :
Institut. :
Title :

Orig Pub. :

Abstract : developed by the reduction of the nitro group with SnCl_2 and spraying of the chromatograms with Ehrlich reagent. R_f values for the above-enumerated acids and for their mono-, di-, and trinitro derivatives are given. The possibility of predicting the chromatographic behavior of the various substances in mixtures from theoretical considerations relating that behavior to the dipole moments and to the H-bond energies is confirmed. For Communication VIII see RZhKhim, 1959, 4395.
J. Vanecek

Card: 4/4

E-3

APPROVED FOR RELEASE: 06/13/2000
Fravic, J. / Analytical Chemistry of organic substances.

CIA-RDP86-00513R000413530006-9

Abs Jour : Ref Zhur - Khimiya, No 14, 1959, No: 49328

Author : Franc, J.
Inst : Not given
Title : Chromatography of Aromatic Isomers. X. Energy of the Internal Hydrogen Bond in Amino- and Hydroxyanthraquinones

Orig Pub : Chem Listy, 52, No 6, 1113-1119 (1958)

Abstract : The author has investigated the relationship between the heat of sublimation of the individual isomers in the amino- and hydroxyanthraquinone series, containing an internal hydrogen bond (RZhKhim, No 4, 1958, 11058). The effect of various fixed phases on the R_f absolute values of a large number of the above-indicated compounds and on the magnitude of the increment in R_M (ΔR_M) produced by the hydrogen bond has been investigated; R_M

Card 1/3

Analytical Chemistry--Analysis of substances.

Distr: 4E2c(1)

Electromigration methods. I. Relation between the structure of aromatic compounds and their mobility in paper electrophoresis. 7 Jaroslav Franc and Milan Wurst (Výzkumný ústav org. synt., Pardubice-Rybitví, Czech.). Chem. listy 52, 1474-8 (1958).—The influence was investigated of the steric arrangement of org. compds. on the magnitude and direction of their mobility in the app. of Wieland and Fischer (C.A. 44, 2390e). The values obtained show that the position of the functional groups on the aromatic nucleus does not influence the final mobility of the compd., with the exception of the *o*-substituted derivs. which form intramol. H-bonds: Contributions of the individual function groups to the total mobility ($\mu \times 10^9$ sq. cm. v.⁻¹ sec.⁻¹) are given in 3*N* NH₄OH and *N* AcOH, resp.: OH, 11.3, 0.0; 2-OH, 20.4, 0.0; 3-OH, 28.1, —; CO₂H, 11.3, 1.0; 2-CO₂H, 20.4, 3.2; SO₃H, 10.0, 7.1; 2-SO₃H, 21.1, 13.0; 3-SO₃H, 27.3, 17.2; NH₂, -0.7, -7.1; 2-NH₂, -1.4, -13.4; NO₂, 0.0, 0.0; Me, 0.0, 0.0; OMe, 0.0, 0.0; CHO, 0.0, 1.2; Cl, 0.0, 0.0. Special correction terms had to be introduced for intramol. H-bonding: O—H—O, -5.9, 3.1; NO₂—H—O (also contg. a *p*-NO₂ group), -1.6, 0.0; NO₂—H—O, 1.2, 0.0; NO₂—H—N (also contg. a *p*-NO₂ group), -0.8, 3.2; O—H—N, 1.7, 3.2. An unknown acid arising as by-product in the Kolbe synthesis of *p*-aminosalicylic acid from *m*-aminophenol was identified as 2-hydroxy-4-aminoisophthalic acid ($\mu = 20.3$). L. J. Urbánek

5
2 may
1

Jef

15

✓ Dyes derived from imidazole. I. Preparation and chromatographic separation of dyes from 1,4,5,8-naphthalenetetracarboxylic and 1,8-naphthalenedicarboxylic acids. Josef Arient and Jaroslav Franc (Výzkumný ústav org. synt., Pardubice-Rybitví, Czech.). *Chem. listy* 52, 1946-50 (1958).—Condensation of 1,8-naphthalenedicarboxylic acid (I) or 1,4,5,8-naphthalenetetracarboxylic acid (II) with the respective diamine by heating for 3 hrs., solns. of the reaction components in 100 ml. AcOH, cooling the mixt., dilg. with an equal vol. of H₂O, and washing the product to neutral reaction gives the following dyes (the components, their amts. in g., yield in %, color, and vatting ability are given): I 10, 3,4-(NH₂)₂C₆H₄OEt (III) 7.4, 69, yellow, poor; I 10, 1,8-naphthalenediamine (IV) 7.32, 88.5, red, poor; I 10, 1,2-naphthalenediamine-HCl (V) 9, 74.6, orange, poor; II —, III —, —, brown, good; II 10, V 12.8, 92.5, violet, poor; II 10, IV 10.64, 84, violet, poor; II 10, V 6.4, 92, —, —. The dyes were sepd. on paper into the individual position isomers. Those with CO₂H groups in the position 1 or 1 and 4 absorb in longer wave lengths than those with CO₂H in 8 or 1 and 5. The first 5 dyes given above were sepd. on Al₂O₃ and fluorescence spectra of the isomers detd. Their R_f is approx. in direct proportion to the shift of the max. and conforms with the relation between the magnitude of the dipole moment and the R_f value of the respective isomer, as suggested in C.A. 49, 9352d.

L. J. Urbánek

4
2 may

JaJ

JW
1/1

AUTHOR: Franc, Jaroslav

CZ/8/52(82)/10-30/39

TITLE: Determination of Methyl p-Toluate in the Presence of Dimethylterephthalate by Paper Chromatography
(Stanovení p-toluylátu methylnatého vedle dimethyltereftalátu papírovou chromatografií)

PERIODICAL: Chemické Listy, 1958, Vol 52(82), Nr 10, pp 2004-2005
(Czechoslovakia)

ABSTRACT: Since dimethylterephthalate, used in the manufacture of "terylene" fibres, must not contain more than 0.05% of methyl p-toluate it was necessary to evolve a precise method capable of being used for process control. The usual physical methods (e.g. UV and IR spectrophotometry) are not adaptable to process control and no colorimetric method is used since no suitable colour reaction is known. A paper chromatographic method has been developed for the separation of methyl p-toluate and it is possible to detect it with FeCl_3 after the conversion of the ester to its hydroxamic acid derivative by hydroxylamine. Since the hydroxamic acid from methyl p-toluate (p-toluyl hydroxamic acid) is soluble in water and ethanol, whilst that from the terephthalic acid is practically insoluble in water,

Card 1/5

Detèrmination of Methyl p-toluate in the Presence of
Dimethylterephthalate by Paper Chromatography

CZ/8/52(82)/10-30/39

alcohol or ether, it is possible to separate off the terephthalic acids (including monodimethyl) by filtration and so increase the sensitivity. Following chromatography the amount of methyl p-toluate is found by comparison with a standard serial dilution of the hydroxamic acid derivative of methyl p-toluate run on a chromatogram under the same conditions (FeCl_3 colour development).

Reagents. The hydroxylamine solution is prepared shortly before use by mixing cold solutions of 5% hydroxylamine hydrochloride in ethanol and 5% KOH in ethanol (1:2). The KCl released is filtered off and appropriate amounts of the solution used. n-Butanol/ethanol/water (2:2:1) is used as a chromatographic solvent (and for saturating the chromatography cabinet) and the chromatogram developed with FeCl_3 solution in n-butanol/ethanol (4:1) (25 g/l). The micropipette for spotting is calibrated with mercury.

Card 2/5

Standard dilution series. Methyl-p-toluate (0.25 g) is

CZ/8/52(82)/10-30/39

Determination of Methyl p-toluate in the Presence of
Dimethylterephthalate by Paper Chromatography

dissolved in ethanol in a 100 ml standard flask and the flask made up to the mark with ethanol. 10 ml of this solution is pipetted off and the hydroxylamine solution (40 ml) added to it, heated to boiling for 10 mins and allowed to cool and the volume restored to 50 ml (loss of ethanol during boiling). A series of 5 μ l, 10 μ l, 15 μ l etc. are spotted on the chromatograms (\approx 2.5 μ g, 5.0 μ g, 7.5 μ g etc. corresponding to 0.05%, 0.10%, 0.15% etc. of methyl p-toluate). Chromatography and detection are carried out as above. Starting spots must not have larger diameter than 0.8 cm.

Determination of methyl p-toluate in technical dimethylterephthalate. Technical dimethylterephthalate (5.0 g) is weighed into a 250 ml beaker and 96% ethanol added (50 ml). Heat until all is dissolved and then allow to cool. The crystals of dimethylterephthalate which separate out are filtered on a small Buchner funnel and washed with ethanol (3 x 10 ml). The filtrate is quantitatively transferred to a beaker and concentrated to 20 ml. Further crystals formed are filtered off and again washed (3 x 5 ml ethanol). The

Card 3/5

Determination of Methyl p-toluate in the Presence of
Dimethylterephthalate by Paper Chromatography

CZ/8/52(82)/10-30/39

filtrate is reduced to 10 ml, any crystals filtered off and hydroxylamine solution (40 ml) added. Boil for ten minutes and filter into a 25 ml graduated cylinder after cooling and make volume up to 25 ml. This solution (0.025 ml exactly) is spotted for chromatography on Whatman No.4 (13 cm x 24 cm). Carry out descending chromatography (2 hour sufficient, movement of front 7 cm). Dry the chromatogram at normal temperature and spray with the FeCl_3 solution. Blue-violet spots on drying ($R_F \sim 0.78$) (other materials remain at start). Compare their intensities with the standard series. The amount of total material spotted is $\approx 5000 \mu\text{g}$ so that $2.5 \mu\text{g}$ of methyl p-toluate corresponds to 0.05%. Spots corresponding to this allowable amount are on the threshold of detection, which is very favourable to evaluation. It should be noted that methyl p-toluate is 357 times more soluble in ethanol at 20°C than dimethylphthalate, otherwise certain difficulties would have arisen. It is considered that

Card 4/5

Determination of Methyl p-toluate in the Presence of
Dimethylterephthalate by Paper Chromatography CZ/8/52(82)/10-30/39

the amount of methyl p-toluate remaining the dimethylterephthalate crystals, after washing, will not influence the precision of the method. Care must be taken to ensure that the hydroxylamine solution is always fresh and that the spotting and chromatography be carried out soon after preparation of the hydroxamic acids from the esters.

There are 1 figure and 2 references, both of which are English.

ASSOCIATION: Výzkumný ústav organických syntes, Pardubice-Rybitví
(Research Institute for Organic Syntheses, Pardubice-Rybitví)

SUBMITTED: March 14, 1957

Card 5/5

COUNTRY	: Czechoslovakia	E-3
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 5 1960, No.	17580
AUTHOR	: Franc, J.	
INST.	: Not given	
TITLE	: The Chromatography of Organic Compounds. I. The Separation of Thiosemicarbazones of Aliphatic Ketones by Paper Chromatography.	
ORIG. PUB.	: Chem Listy, 52, No 12, 2311-2315 (1958); Collection Czechoslov Chem Commun, 24, No 7, 2096-2101 (1959)	
ABSTRACT	: One ml of a mixture of ketones is heated for 1 hr over a water bath with 1 gm of thiosemicarbazide in a flask equipped with a reflux condenser. The thiosemicarbazones (TSC) which are formed are extracted with ether from the reaction mixture after dilution of the latter with water. The ether solution is deposited on Whatman No 1 paper impregnated with 30% alcoholic formamide or dimethyl formamide solution or with 20% acetamide solution and chromatographed by the descending method,	
CARD:	1/3	

COUNTRY	:	Czechoslovakia	E-5
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 5 1960, No.	17580
AUTHOR	:		
INST.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	<p>using chlorocyclohexane, CCl₄, chlorobenzene, and a mixture of cyclohexane and n-butanol (25 : 1) as the developing agent. The chromatogram is dried, sprayed with a 5% solution of AgNO₃, and impregnated with 1-2% ammonia, with the formation of black spots. The minimum detectable quantity is 1-2 gammas of TSC. When Ehrlich reagent (a 1% solution of p-dimethylaminobenzoic aldehyde in 2 N HCl) is used, the TSC give yellow spots which fluoresce under UV-light. R_f values for the TSC</p>	
CARD:	2/3	128	

COUNTRY:	:	Czechoslovakia	2-5
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 5 1960, No.	17580
AUTHOR	:		
INST.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	<p>of 14 ketones prepared under the above conditions are given. The method described is suitable for the semiquantitative determination of methylcyclohexanone in technical cyclohexanone, p-tolylaldehyde in technical dimethylterephthalate, and many other aldehydes and ketones in the presence of very large (up to 200-fold) excesses of other ketones.</p> <p style="text-align: right;">J. Vanacek</p>	
CARD:		3/3	